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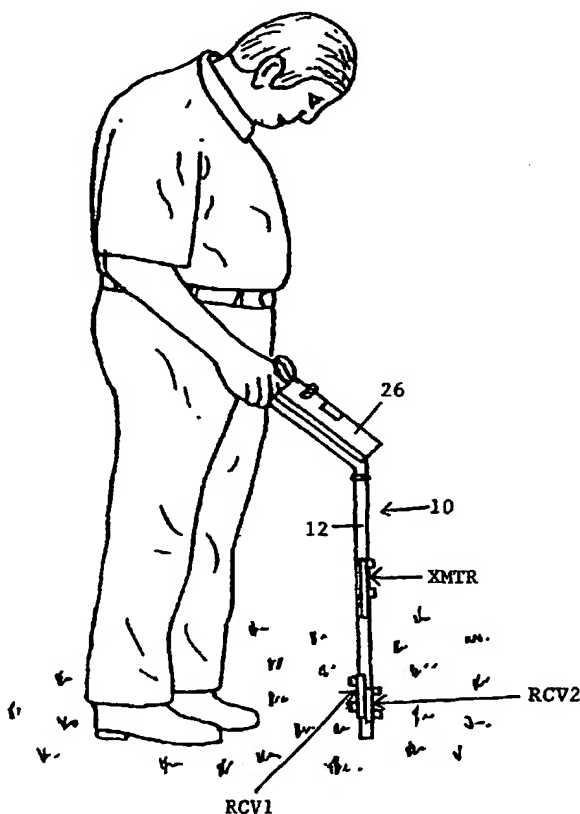
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(54) Title: APPARATUS AND METHOD USING CONTINUOUS -WAVE RADIATION FOR DETECTING AND LOCATING TARGETS HIDDEN BEHIND A SURFACE



(57) Abstract: Continuous-wave radiation is used to detect a target hidden behind a surface. In an embodiment, a transmitter directs a beam of continuous-wave microwave radiation from a transmitting location, and reflected radiation from the target is received at first and second receiving locations closer to the surface than the transmitting location. The transmitting and receiving locations have spatial relationships such that the phase of reflected radiation received at one receiving location is in quadrature with the phase of reflected radiation received at the other receiving location. In an embodiment, direct transmitted radiation is received at the receiving locations in quadrature.